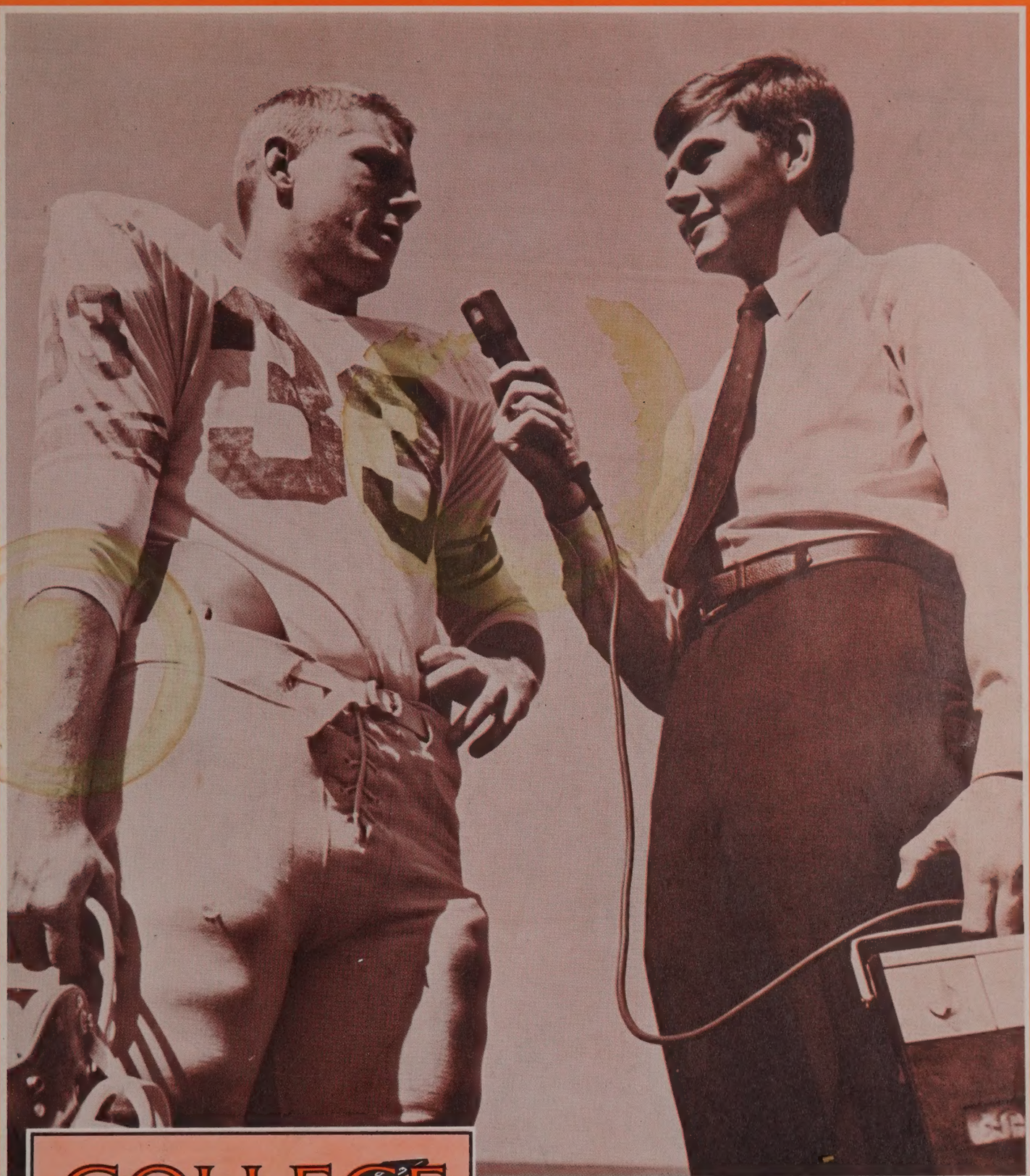
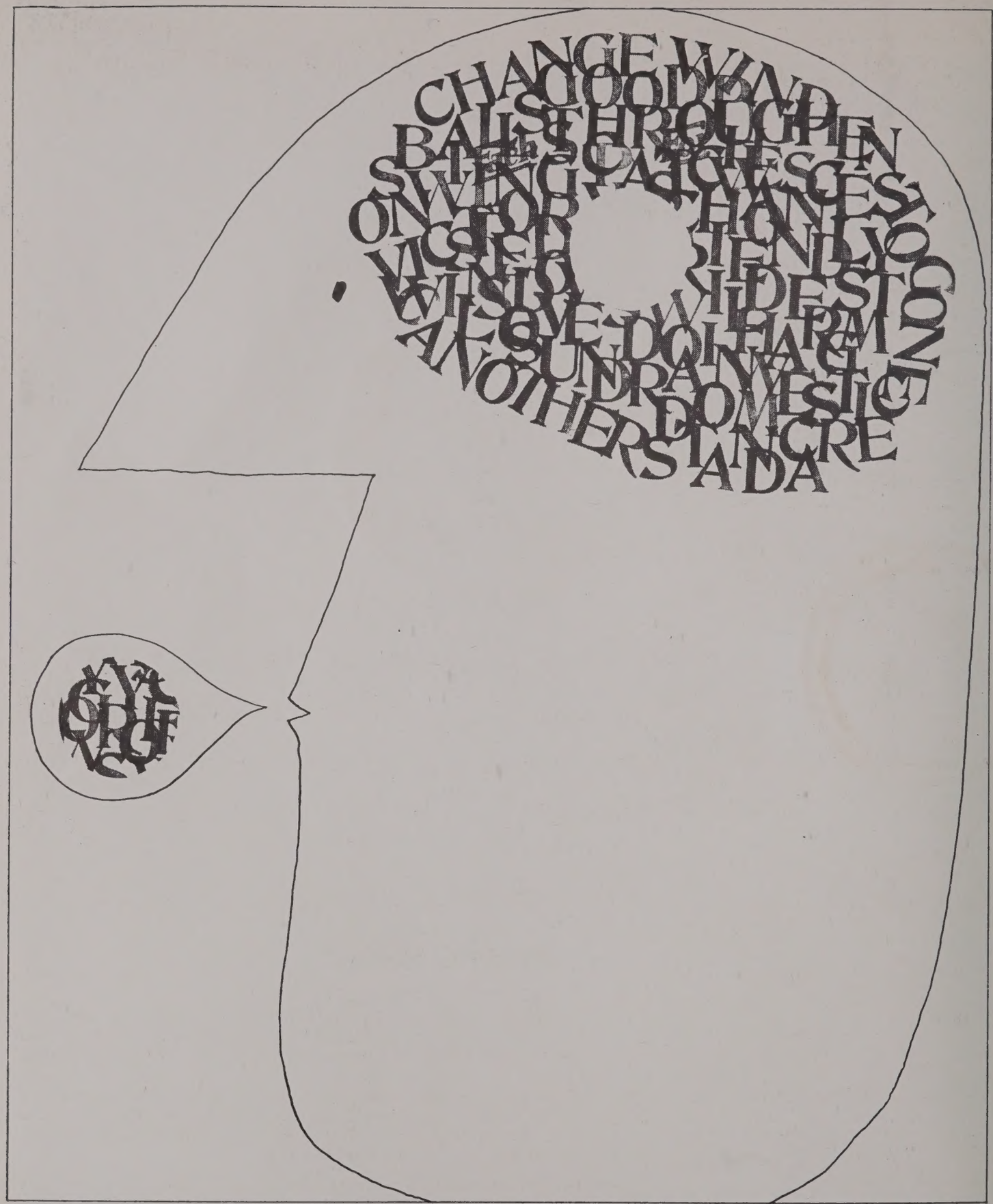


COLLEGE RADIO

THE VOICE OF A GREAT INDUSTRY

OCTOBER, 1968



There are 600,000 words in the English language. The average college student may have a vocabulary of 80,000. But nearly 60% of all he says is said with just 100 different words.

COLUMBIA SCHOOL OF BROADCASTING
Not affiliated with the Columbia Broadcasting System, Inc.

COLLEGE RADIO

305 COMMUNICATIONS BUILDING
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA 74074

OCTOBER, 1968
VOL. 6 NO. 1

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ON THE COVER . . .

It's been said that the '68 season is the GREATEST yet in college football . . . Our cover photo (taken by Associate Editor Dave G. Houser) depicts the traditionally important role that collegiate broadcasting plays in airing thousands of hours of play-by-play, football news and features across the country.

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From the Editor . . .

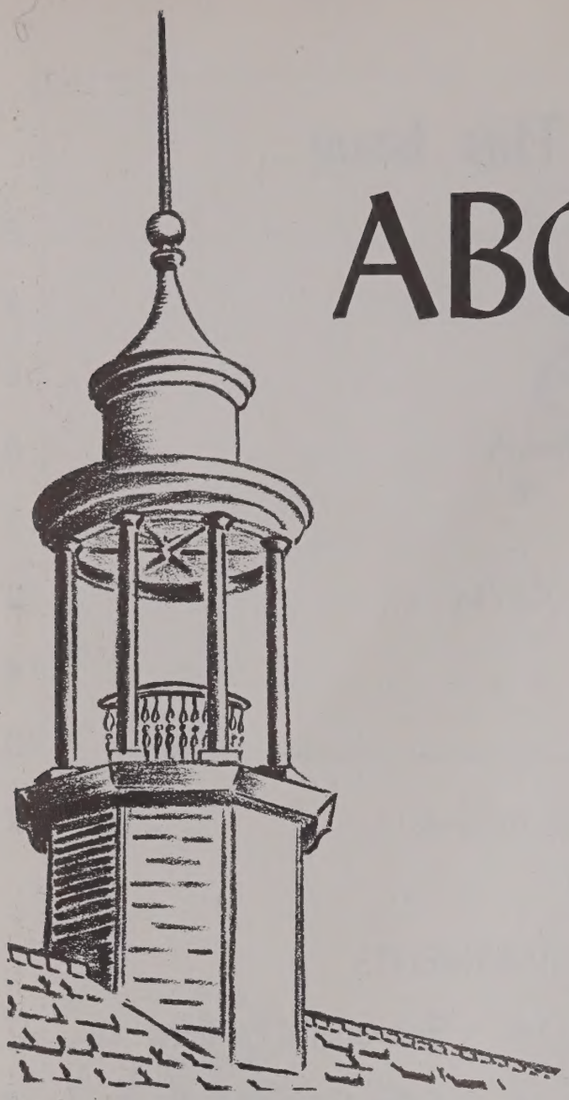
Did You Say Problems?

College Radio has certainly had its share in the last three months. This was undoubtedly due to the confusion which resulted from the moving of CR's home grounds to Oklahoma State University.

Now that things have settled down, I would like to personally thank all of those who have helped me, and the new CR staff in clearing up all the difficulties that were incurred during the move. There were far too many to mention by name.

It is the sincere desire of *College Radio's* new staff to make CR an even better magazine that it was last year. Of course, this can *only* be done if *you* are willing to join with us in that effort.

Take a good look at the articles in this issue. Is your story in print? What's happening at your station? Do you have a studiomate? Send us the story and some photos! Join with us in making CR the true voice of collegiate broadcasting.



ABOUT CR's NEW

As announced March 28, 1968, by IBS Vice-President for Publications, J. T. Anagnoson Jr., COLLEGE RADIO magazine has moved to Oklahoma State University. Editing and publishing will be done under the supervision of the Department of Radio and Television.

Oklahoma—the fabled land of oil wells and windswept plains, cowboys and indians—is the new home of *COLLEGE RADIO* magazine.

Yep . . . after five years of publication at its birthplace in Bethlehem, Pa., CR has "up'n gone west"!

Oklahoma State University, a "land grant" university founded in 1890, is situated on a 150-acre campus in the north-central Oklahoma city of Stillwater— midway between Tulsa and Oklahoma City.

Originally an agricultural and mechanical college, OSU's curriculum has been greatly expanded in recent decades to include degree offerings in 85 different fields from art to zoology. The University is coeducational and has a current enrollment of more than 16,000 students.

Enrollment in OSU's Department of Radio and Television reached the "magic" century mark last spring—the largest in the department's seven-year history.

"More than 300 students have passed through the department during the seven years of its existence, but never before have 100 students been majoring in radio and television at the same time, noted Department Head Dr. Robert P. Lacy.

The son of one of Oklahoma's best known radio personalities became the 100th student to declare broadcasting as his major last spring. Nik Jones, son of Jay Jones, program director for KVOO Radio, Tulsa, joined the department on a president's scholarship —based on his 3.95 high school academic record.

Nik plans to work on one of the University's two student-operated radio stations, and will also assist in the editing of *COLLEGE RADIO* magazine.

In joining his 99 fellow radio-television majors at OSU, Nik becomes a student in the largest such department among Oklahoma's 25 colleges and Universities.

The department has grown steadily since 1960, when Dr. Lacy came to OSU from Ohio State University to organize the department—which at the time boasted only five majors.

OSU broadcasting students operate two FM radio stations—KVRO and KOSU. Both stations have made considerable contributions to college radio.

KVRO leads all other news media in Oklahoma in informing students on the Oklahoma State campus of local, national and international news. KVRO has won 20 United Press International awards for the best news stories, editorials and documentaries in recent years. It was also the first place recipient of the Coca-Cola Newscast Award. KVRO programs "top 40" music seven days a week at 105.5 MC.

KOSU plays only classical music seven days a week, and was Oklahoma's first multiplex station to broadcast 100 per cent in stereo.

The faculty in Radio-Television—which offers both a bachelor's and master's program—include D. Robert P. Lacy, Dr. M. C. Topping and Mr. Jack Deskin. Deskin will serve as publisher for *COLLEGE RADIO.*

CR's new editorial staff is directed by Publisher Jack Deskin, 26-year-old Radio and TV instructor at OSU. Deskin received his M.A. degree in speech from OSU last year.

Editor-in-chief is Dick Haynes, a senior broadcasting major, who also serves as program director for KVRO.

HOME

OSU broadcasting personnel—(left to right) Ted Leitner, KVRO-FM general manager; Al Dolman, KOSU-FM general manager, and Dick Haynes, KVRO program director (also CR editor).

Journalism graduate student Dave G. Houser serves as associate editor and is responsible for design and layout.

C. D. "Dennis" Schick, OSU advertising instructor, doubles as advertising manager for CR.

Bruce Nelson will remain as CR's circulation manager, performing his unheralded duties from the Middletown office—as was done prior to CR's move.

George F. Eustis will continue to serve as a contributing editor, and a new staff edition in this capacity is Ted Leitner, senior broadcasting student at OSU.

Additional contributing editors are needed, by the way—if interested, contact Editor Haynes right away.

NATIONAL NEWS

IRTS NAMES NEW EXEC.

Mr. Robert H. Boulware has been named executive director of the International Radio and Television Society. The society, which makes its home at 420 Lexington Avenue in New York, is well known in college broadcasting circles for its annual "College Conference" each April.

Mr. Boulware succeeds into office Lawrence W. Bruff, who has headed the day-to-day operations of the society for the last two years. Mr. Bruff has "retired" to Virginia Beach, Virginia.

Mr. Boulware has announced that the tentative date for the 8th Annual IRTS College Conference is April 17-18.

He comes to IRTS from Papert, Koenig & Lois, and with years of activity in the agency business. Mr. Boulware has managed WSAI Radio and WLW (TV) in Cincinnati, and is a graduate of Ohio University majoring in Marketing and Journalism. He has served consecutive two-year terms on the IRTS Board of Governors in 1965 and 1967.

EUSTIS SPEAKS

IBS President George F. Eustis, Jr. presented a paper entitled "Automatically Controlling Signal Levels in Live Color Cameras" at the International Broadcast Symposium September 19-21 in Washington, D.C.

The 18th annual Symposium, sponsored by the IEEE Group on Broadcasting, served as a forum for broadcast engineers concerning recent developments in the industry.

Eustis, one of 18 Symposium speakers, based his discussion of signal level control on recent developments at WPIX-TV, New York City.

His presentation described the method used to automatically control the peak video and pedestal of a live color camera signal under varying scene illumination. The advantages of automatic controls in live pickup were discussed as related to actual field practice.

INTERNATIONAL COOPERATION

IBS and the European International Broadcasters Society have agreed on a plan to broaden services internationally.

The International Broadcasters, founded in 1961, is the global professional association of TV-radio in 103 lands. This society will aid the collegiate system by securing quality radio programming for U.S. radio stations subscribing to the IBS service.

NEW WESLEYAN SERIES

Ohio Wesleyan University has started production of a new radio program series, *International Outlook*. This weekly 15 minute taped series considers the views of international students currently studying in the United States, and Americans who have had unique travel experiences abroad.

AMERICAN FM TIE-UP

WBRU-FM at Brown University has become the first and only college station in a major market to become affiliated with the American FM radio network, a division of ABC.

GUILD SERIES AVAILABLE

The American Guild of Authors and Composers has just completed the first of a series of radio programs entitled—"An Art And A Business". The series will be made available to all college stations on a no charge basis.

GOLDMARK HONORED

Dr. Peter C. Goldmark, president and director of research of CBS Laboratories, has received an honorary Doctorate of Science degree from Fairfield University.

CALENDAR

October 17-18—NAB Fall Conference, New York Hilton, New York.

October 21-22—NAB Fall Conference, Ambassador Hotel, Los Angeles.

October 24-25—NAB Fall Conference, Denver Hilton, Denver.

October 26—IBS Southern Regional Conference.

November 11-12—NAB Fall Conference, Sheraton Gibson, Cincinnati.

November 14-15—NAB Fall Conference, Dallas Hilton, Dallas.

November 18-19—NAB Fall Conference, Atlanta Marriott, Atlanta.

November 23—IBS Pacific Regional Conference.

December 1—Deadline for NAB Grants for research in broadcasting. For application forms, write to: Mr. Howard Mandel, Vice President, Director of Research; National Association of Broadcasters; 485 Madison Avenue; Suite 1910; New York, N.Y. 10022.

March 21-22—CONVO 30, The 1969 Intercollegiate Broadcasting System Convention in Washington, D. C. Convention Headquarters: Washington Hilton Hotel.

Teen Girls Favor Radio

Any teen male having trouble getting a teen age girl's ear might do well to put his message on radio, if he could afford it, because that's what she's tuned to much of the time.

Marketers who want to get the attention of the nation's mini-skirt crowd also will do well to spend their dollars on radio time and forget their "newspaper-only" advertising policies.

A new survey by *Seventeen* magazine of the at-home entertainment habits of 13 to 19 year-old girls shows they spend 21½ hours a week listening to radio. What's more, girls in that age bracket own 18,000,000 of the nation's radios, which amounts to 10.3% of the total.

Teen girls are also fond of TV, phonographs and tape recorders. They spend an average of nine hours a week listening to phonograph records, two hours watching TV and 40 minutes listening to tape recordings. Seven out of ten girls own their own phonographs, and they are becoming a major factor in the booming portable TV market, with 76.6% of those who report owning their own sets having portables.

This year, teen-age girls will account for new sales of 4,500,000 home entertainment appliances. They'll buy 1,-800,000 radios; 1,000,000 phonographs; 800,000 tape recorders; and 700,0000 TV sets.

More than 12,000,000 girls will spend nearly one-forth of their waking hours listening to these appliances.

Further proof... sound has never been in better shape!

RE55 *OMNIDIRECTIONAL DYNAMIC MICROPHONE*

There are plenty of good, functional reasons behind the new look of Electro-Voice professional microphones. Reasons dramatically proved by the rapid success of the Model 635A and the RE15. Now we've added the RE55 to this handsome group.

The RE55, like its predecessor the 655C, is an extremely wide-range omnidirectional dynamic. And in most electrical particulars it is not greatly different. RE55 frequency response is a bit wider, and perhaps a trifle flatter. An impressive achievement when you consider that the 655C has been extensively used as a secondary frequency response standard. Output level is 2 db hotter, and the exclusive E-V Acoustalloy® diaphragm of the RE55 can provide undistorted output in sound fields so intense as to cause ear damage.

The biggest changes in the RE55 are mechanical. For this microphone is even more rugged than the 655... long known as one of the toughest in the business. There's a solid steel case and new, improved internal shock mounting for the RE55. Plus a satin nickel finish that looks great on TV long after most microphones have been scarred and scratched almost beyond recognition.

For convenience we've made the barrel of the RE55 just 3/4″ in diameter. It fits modern 3/4″ accessories. It also fits the hand (and its length makes the RE55 perfect for hand-held interviews). We also provide XLR-3 Cannon-type connectors to help you standardize your audio wiring. Detail refinements that make the RE55 more dependable, easier to use.

Finally, the RE55 has the exclusive Electro-Voice 2-year *unconditional* guarantee. No matter what happens, if an RE55 fails to perform during the first two years — for any reason — we'll repair it at no charge.

Try the Electro-Voice RE55 today. The more you listen, the better it looks!

ELECTRO-VOICE, INC., Dept. 1081CR, 641 Cecil Street, Buchanan, Michigan 49107

• high fidelity speakers and systems • tuners, amplifiers, receivers • public address loudspeakers
• microphones • phonograph needles and cartridges • organs • space and defense electronics

Electro-Voice®

A SUBSIDIARY OF GULTON INDUSTRIES, INC.

A distinguished list of speakers marked the annual IRTS convention . . . here, Walter Cronkite, CBS news correspondent and Richard S. Salant, president of CBS News lead the News and Public Affairs session.

IRTS College Conference Draws Record Attendance

History records the 7th Annual IRTS College Conference April 18-19 in New York, as the biggest yet!

New features vied with top-notch sessions to attract a record attendance of 325 students from 125 campuses (many assisted by IRTF grants).

Among the new program items were the Friday morning tours and Faculty Conference. Although newcomers to the program, both were extremely popular. Tours were offered of ABC, CBS, NBC, WOR Radio, Reeves Sound Studios, H-R Representatives, and Ted Bates & Co. The 35 faculty members in attendance met with CBS's Dr. Frank Stanton Friday morning in an informal discussion.

In addition to nine sessions covering the scope of broadcasting, the conference heard luncheon addresses by William Kaland of Group W and the FCC Education Office's Dr. Robert L. Hilliard; banquet address by John F. White of National Educational Television; closing remarks by Roy Danish of the NAB's Television Information Office (who also chaired an IBS Convention Careers session), and IRTS President Edward P. Shurick.

Kaland's luncheon address Thursday centered on programming creativity. He discussed concern and involvement, aspects of style, and the elements and role of a program.

Dr. Hilliard's address dealt with sociological aspects of television and radio, and concluded with a recommendation for the establishment of a national communications university.

Panels at the sessions made presentations on NBC Television schedules, the four new ABC Radio Networks, local "community" radio, the independent producer, advertising agencies, and news and public affairs.

Outstanding participation of these sessions were CBS's Walter Cronkite, ABC's Walter A. Schwartz, and NBC's Don Durgin.

Following tradition, delegates were offered the opportunity to question panelists at the Thursday evening "Potpourri" session. With full audience participation, "Potpourri" delved into the many facets of the academic side —broadcast curricula and the broadcasting "profession."

Washington D.C. To Host Convo30

Washington, D.C., has been announced as the site of the Spring 1969 National Convention of the Intercollegiate Broadcasting System. The Convention, dubbed Convo30, will mark the beginning of IBS's 30th anniversary year, and will be held at Washington Hilton.

Convo30 will convene on Friday, March 21, 1969 and run through Sunday, March 23. The IBS Convention Committee chose the location and date to again parallel the national convention of the National Association of Broadcasters. The NAB Exhibit floor will once again be open to IBS through the courtesy of the NAB Convention Committee.

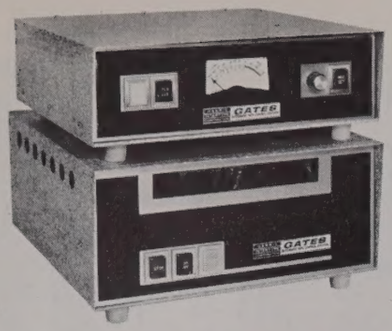
Building on the increased popularity of recent conventions, the Convo30 schedule will be expanded in several ways. Additional workshops and industry sessions will be scheduled for Sunday morning to enable delegates to attend more sessions and to decrease the number offered each session time period.

An innovation in the area of exhibits will be the use of the Hilton's exhibit floor, centralizing the location of the more than 40 record, publication and equipment companies expected to exhibit at Convo30. Exhibit hours will be extended so that the floor will be open for six hours—in addition to the NAB exhibit hours on Sunday.

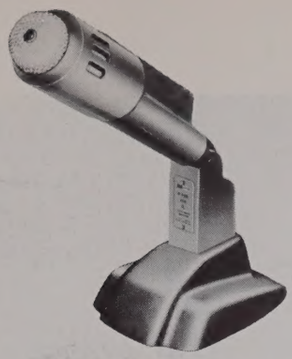
Convo30 has scheduled a dinner for Saturday evening to replace the luncheon of years past. Also, arrangements are being made to enable delegates to tour local stations— one of the more popular additions to the program last spring in Chicago.

Although one of the closest hotels to the NAB Show, the WH is just minutes from the White House. Celebrating its third birthday this fall, the hotel is the newest and most modern in Washington.

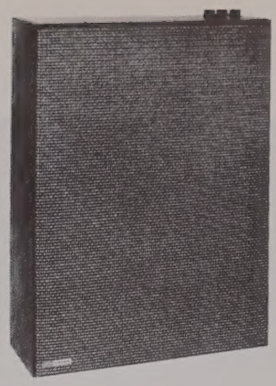
It all adds up to a really great week. So circle the dates on your 1969 calendar now—March 21-23, Convo30.



CRITERION TAPE CARTRIDGE SYSTEM. All solid state. Direct capstan drive comparable to finest reel-to-reel machines. Speed accuracy of 0.2%. No tape skewing. Superb fidelity.



PROFESSIONAL MICROPHONES. Models available with specifications and quality approved by Gates to meet the particular types of service required in studio and remote broadcasting. Model G-300 cardioid shown.



STUDIO SPEAKER/AMPLIFIER SYSTEM. Professional monitoring with solid state amplifier and loudspeakers combined in attractive thin-line walnut cabinet.

For your every need look to Gates... world leader in radio broadcast equipment

Write for complete information on these Gates products or for other specific equipment and accessories – transmitters, studio consoles and remote amplifiers, tape recorders and remote control units. Or ask for our complete 10-watt educational FM broadcast station proposal.

SINGLE-RING FM ANTENNA. Omni-directional antenna with power gain of 0.8 dB. is designed especially for educational broadcasting, as is the FM-22 two-ring antenna with a power gain of 1.6 dB.

STUDIOETTE FOUR-CHANNEL CONSOLETTE. A single-channel monophonic consolette with 13 inputs into four mixing channels. Attractive, compact. The popular choice of educational broadcasters.

FM TRANSMITTERS. Gates has consistently offered the most complete line of low-powered, wide-band FM transmitters ... especially designed for educational broadcasting. Featuring direct crystal-controlled cascade modulation. 10-watt BFE-10C, 50-watt BFE-50C and 50-watt BFR-50C.

TRANSCRIPTION EQUIPMENT. Complete 12" and 16" transcription systems with famous Gates turntables that achieve new lows in rumble, wow and flutter – without sacrificing quick cue. Have unique inner-hub drive, smooth-as-silk speed change. Walnut formica cabinets.

GATES

HARRIS INTERTYPE CORPORATION

GATES RADIO COMPANY
QUINCY, ILLINOIS 62301, U.S.A.
A subsidiary of Harris-Intertype Corporation

KLOR

STATION OF THE MONTH

Chief Announcer Bill Martens patches in a telephone circuit for one of KLOR's remote broadcasts. The patch panel was added as part of KLOR's remodeling program early in 1967 and adds great flexibility to the available facilities.

PRESIDENT	Edward O'Donnell Former Program Director
STATION MANAGER	Bill Alfredo
BUSINESS MANAGER	Mike Flosi
NEWS DIRECTOR	Bob Mulqueen
SPORTS DIRECTOR	Dan McGhee
PROGRAM DIRECTOR	Ed Kittrell
SECRETARY	Gerry Wonak

Like to be selected as CR's "Station of the Month"? To be considered, just submit a typed manuscript (1200 words maximum please) written in news-feature format describing your origin, progress, personnel, facilities & equipment, type of programming, service activities, honors & awards, and future plans etc. — things that you think make your station a particularly outstanding one. Include about ten good, clear 8 x 10 glossies depicting station operations, personnel, facilities etc. Easiest national publicity you'll ever get!

KLOR began broadcasting in March of 1963 as the student owned and operated voice of Loras College, Dubuque, Iowa. It was founded largely through the efforts of the Junior Class President, Robert Hajek, and financed in its initial stages by money-raising projects of the newly-formed Loras College Broadcasting Club. Approximately two-thousand dollars was contributed by the student body.

By the fall of 1964, the KLOR facilities included a third-hand Raytheon console, two new Collins turntables, and four homebuilt carrier current transmitters, located in strategic places on campus. A new home-built remote amplifier permitted the station to carry many of the meetings of the Student Senate for the remainder of the 1964-1965 academic year.

A discount store became the first advertiser when it supplied records in exchange for spot announcements, helping the record library grow to about one-hundred albums and one-hundred-fifty 45's.

1966 brought several changes at the station. In November the first broadcast of a play-by-play basketball game (between Loras and Platteville) was carried by remote.

January saw the broadcasts of KLOR move off-campus through the installation of a carrier-current transmitter located at a Mercy Hospital Nurses's Residence. The influence of the female audience brought about a renewal of the programming. Shortly afterward, a contract between the station staff and the Drama Department of nearby Clarke College for Women was signed to promote the exchange of programming.

KLOR technicians improved the carrier-current system at Clarke by installing a telephone loop, and the first program was heard at Clarke in April 1966. This increased the listening audience to 1200 at Loras, 100 nurses at Mercy, and 800 listeners at Clarke.

During January of 1967, the main studio was completely rebuilt. The original Raytheon console was painted, and several new internal parts were installed. The studio was tiled, carpeted, and partially panelled; while sturdy new desks were built. Also, an auto-level amplifier, built from IBS plans, was added with hopes for the purchase of two new tape cartridge machines.

KLOR is organized as a club, independent from the school administration. Earlier this year, a collection among the students brought the usual successful return and permitted further growth. All station officials are stu-

This view of the KLOR operating position shows Station Manager Bill Alfredo at the Raytheon console. Meter mounted on wall indicates operation of "auto-level amplifier" built from IBS specs.

dents elected by the members of the club at the annual elections. Three faculty members serve in a supervisory capacity.

During the 1966-67 year, the KLOR membership included forty students from Loras, plus two women who share weekend afternoon time slots with one of the men on the "Duo Show."

Broadcasts have continued to meet with approval from all three schools that are being served via the TCRN (Tri-Campus Radio Network.

The TCRN is an inter-connection of the radio studio operated by the Drama Department of Clarke. The main studio has switches to permit a signal to travel either way over the leased telephone circuit. Occasionally, remote equipment is carried to the Mercy Hospital School of Nursing for a program from the third outlet of the TCRN.

Future plans of KLOR include hopes for expansion of the area to be served by the station. One idea under discussion is to expand the area by including an FM format. This can be done with the use of the local CATV-FM cable system and will be able to reach all residents of nearby Dubuque. Another possibility is the inclusion of WGVU at the University of Dubuque in the network system.

Clarke College is once again considering a massive renovation of its studio facilities. Much of the work is to be done by the station's technical staff. Along with the normal maintenance of the station and the installation of the cartridge machines, projects are planned to include: devising a time clock for the improved studio layout, and additional remodeling. With these changes more Clarke programming will be offered. As before, they would be carried through the TCRN under the program-exchange agreement.

Ideas for next year include the broadcast of background music daily from 8:00 a.m. until regular programming begins. This will be accomplished with the use of the new tape cartridge machines, an improvised AUTOMATION machine. A source of background music can be taped from the local CATV-FM station and used with their permission.

Advertising sold by the news department is paying for the cost of the installation of a wire-service teletype printer. Normally, advertisers for the coming broadcast

Story Continued on Page 16 (See Pictures Next Page)

Chief Engineer John Mans runs a test on KLOR's homemade remote amplifier. John, a senior, has been with the technical staff since his freshman year and now holds a first-class license.

Last October, KLOR originated an entire day's programming from the studen-operated "KAMPUS KARNIVAL". KLOR's booth featured complete remote facilities including a turntable improvised especially for the occasion. Shown at the mic is Ed O'Donnell and the engineer's position is filled by technician Barry Niederriter.

Chief Announcer Bill Martens (left) and Program Director Ed Kittrell select 45 rpm "oldies" for programming during the coming wee as "KLOR ENCORES".

President Ed O'Donnell checks over the IBS Master Handbook for hints on setting up a format for a new program log. Shown is KLOR's collection of LP's, now numbering about 500 discs.

Play-by-Play . . .

A Great Opportunity For Collegiate Broadcasters

By
Ted Leitner

If you can, imagine yourself as a freshman at Oklahoma State University—1500 miles from your New York home. You'd like "someday" to become a sportscaster and during your first week at school you're asked if you'd like to travel to Little Rock, Arkansas to assist with the play-by-play of the Oklahoma State-Arkansas season opener.

Would you like to go? As if anyone would ever think of turning down an opportunity like that one! Since that day in Little Rock, the opportunities I've had in sportscasting have opened up a whole new life and career for me.

Learning to become a play-by-play man is not the easiest thing in the world to do. At any rate, Little Rock turned out to be a successful starting point for me.

It was like a child trying to learn how to swim and finally being pushed into the water—"a learn or else" situation.

Luckily, I did more swimming than sinking that weekend. Throughout the first half, I merely observed the operation and did some token spotting, just to make myself useful. After all, the station had seen fit to spend a lot of money to take me along, and the least I could do was pretend to do a little work.

At the end of the first half, the regular play-by-play man left the booth to make a phone call and since then I have been doing the sportscasting for Oklahoma State varsity games. When the "veteran" returned, I started to get out of his chair but was told to sit there and take over for the second half.

So, there I was, doing play-by-play for the first time in my life and at the same time actually seeing my first college football game in person! Frightening? You bet!

My sportscasting inauguration into basketball and baseball were under fairly similar circumstances during my freshman year. Luckily, again, I seldom sank after being pushed into the water. After looking back on it, it seems to be the most effective way of learning a skill that doesn't come easily. One full game of play-by-play gave me ten times more experience than being told what an announcer should and shouldn't do.

In the last three years, I've tried to use this approach in teaching new freshmen the "art" that I, myself, am a long way from mastering.

Sportscasting at a university is quite a unique situation compared to the average radio station that covers a team's activities. In the case of Oklahoma State, normally just the home games are broadcast, with only an occassional road game (such as the Little Rock experience). Secondly, you find the campus station "competing" with a large station that usually originates the university network. If one has any ideas about actually trying to compete with the network for listeners, it is indeed a sad illusion.

But announcers have rather large egos, and what spurs the ego is the idea that there are many people sitting in their living rooms or cars listening to him call the game. The thought that there just might not be too many listeners tends to discourage the college sportscaster.

The important thing to remember is that the opportunity to *do* the game is the main thing to be concerned with while at college. Scores of students would give up their flasks and fifty-yard line seats just to be able to sit in the press box and broadcast the

(Continued on Page 14)

To: Circulation Manager
COLLEGE RADIO Magazine
Wesleyan Station
Middletown, Conn. 06457

_____I plan to change my address in the near future. (please enter your new address below and attach the mailing portion of this issue to this form. Allow 5 weeks for change.)

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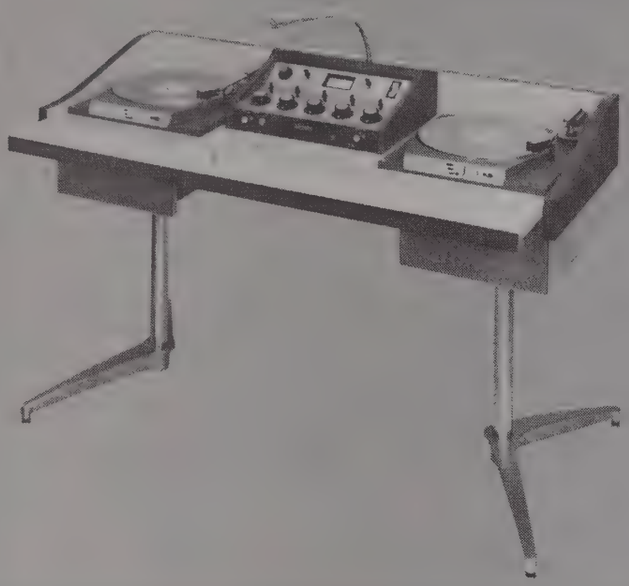

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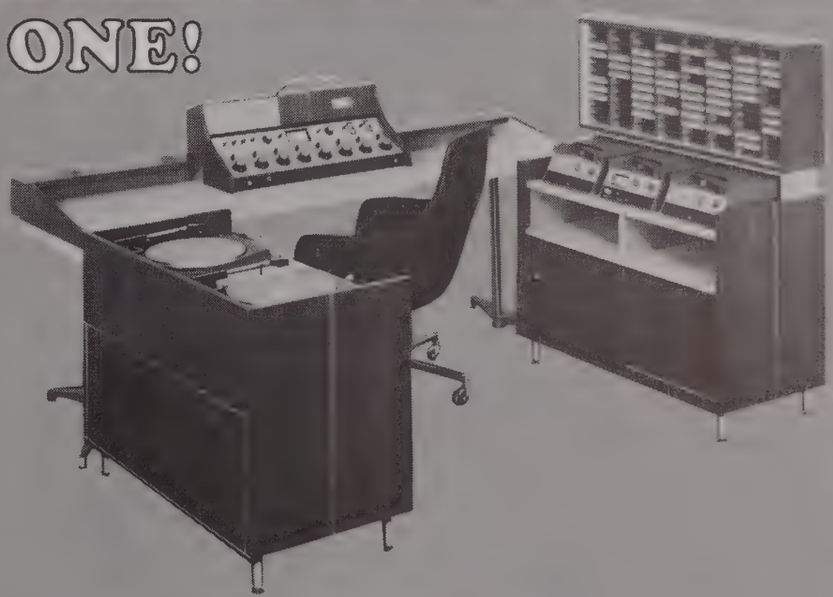

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Play By Play

(Continued from Page 12)

game—to have a chance to develop this lucrative skill.

When getting down to the basic techniques of sportscasting, there is absolutely no difference between the campus station and the network. It matters very little whether it's Jack Buck or Lindsay Nelson or a student at Slippery Rock, the techniques of announcing the game are the same.

One of the most important factors is getting set-up before kickoff (since this is the football season, we'll stick to its ideas and vernacular). There are numerous things to take care of before that man points the finger and its time to take the air. This includes getting lineups, setting up spotting charts (depending on which of the many systems is being used), readying the equipment, checking any late changes that might have been made and many, many other items that are too numerous to mention. As far as the actual broadcasting, it's entirely up to the individual to develop his own style and patterns.

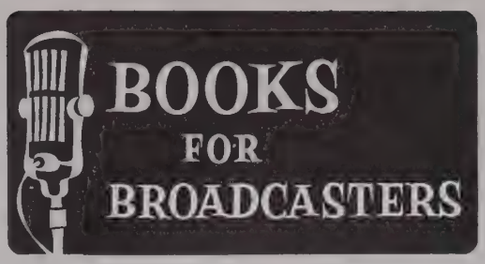
I have found listening to the pros like Marty Glickman, Mel Allen, Jack Buck, and Curt Gowdy helpful, but trying to imitate a well known sportscaster can be a big mistake for a College student. Develop your own style and delivery, stick with it, and you can't go wrong.

The most important factor, worth repeating, is not to think about competing with the major station or worrying about listeners. Use the four years of college sportscasting as the great opportunity it really is for the student who wants to work hard at developing a rewarding career potential.

If doing the game increases the student's ability by only five percent, then he will be five percent better off when it comes time to go to work for a commercial station or network. Then it will be time to worry about those people with their ears to the radio listening to you.

It's ridiculous to feel inferior to anyone because you're "just" the college announcer doing the games. It's important, when you're up in the stadium press box, to feel like a professional and conduct yourself like one. It's the same as feeling comfortable because you're dressed well. Feel like a pro, and you'll sound like one. Try it; it works.

—



(In this and future issues of CR, your editors will list and briefly describe books of special interest to broadcasting personnel. Dr. M. C. Topping, OSU Department of Radio and Television, has generously consented to review some of the important new books in the field for future issues. Reviews by other qualified individuals are invited for publication in College Radio.)

How to Announce for Radio and Television. Edited by William Kaufman, Hastings House, New York, 96 p, $2.95 (Communications Arts Books). Advise and suggestions for the novice broadcaster from 12 top-flight veteran announcers.

Radio Broadcasting—An Introduction to the Sound Medium. Edited by Robert L. Hilliard, F.C.C., Hastings House, New York, 192 p, $4.40 paperback—$6.95 hardbound (Communication Arts Books). An up-to-date text on the principles and techniques of modern radio broadcasting. Covers five basic areas: 1) Management and programming; 2) Operating and studio facilities; 3) Producing and directing; 4) Writing, and 5) Performing.

104 Easy Transistor Projects You Can Build. Bob Brown, Tab Books, Blue Ridge Summit, Pa., 224 p, $3.95 paperback—$6.95 hardbound. A brand new circuits/projects book for hobbyists, experimenters, hams, audiophiles, technicians etc. Some of the 104 projects—reflecting the latest advances in solid state technology, including FET and SCR—in this how-to-do-it handbook include a high gain telephone pickup; wireless mike; electronic megaphone, and a CB receiver.

The Man Behind The Mike: A Guide To Professional Broadcasting.

Tab Books, Blue Ridge Summit, Pa., 288p, $7.95 hardbound. A new book that offers practical and helpful guidande on every phase of announcing. The beginner will learn how to develop true professional talents—how to become a good DJ, a newscaster, or other specialist. For the veteran who wants to improve or find his niche, part 3 tells how to gain self-confidence, how to improve, and how to get better jobs and promotions. Use of the down to earth pointers in this volume will help anyone gain the knowledge to become a professional broadcaster.

Radio Promotion Handbook.

Tab Books, Blue Ridge Summit, Pa., 256 p., Comb-bound $9.95. New publication by noted station promotion authority William Peck, is aimed at

(Continued on Page 24)

STATEMENT OF OWNERSHIP

(Act of October 23, 1962; Section 4369, title 39, United State Code.)

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2. Title of Publication: COLLEGE RADIO Magazine.
3. Frequency of issue: 6 times per year, 10th of October, November, December, February, March, and April.
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6. Names and address of Publisher, Editor, and Managing Editor:
   Publisher, Jack W. Deskin, 704 W. 8th, Stillwater
   Editor: Dick Haynes, 619 University, Stillwater
   Managing Editor: Dick Haynes, 619 University, Stillwater
7. Owner (If owned by a corporation its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning one percent or more of the total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address as well as that of each individual must be given): Intercollegiate Broadcasting System, Inc. (non-profit); Corporate Office: 2005 Industrial Bank Building, Providence, Rhode Island; General Business Office; Stillwater, Oklahoma. A non-profit corporation, no stockholders.
8. Known Bondholders, Mortgagees, and other security holders owning or holding one percent or more of total amount of bonds, mortgages, or other securities: None.
9. None
10.

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C.	Total Paid Circulation:	2104	2275
D.	Free Distribution (including samples by mail, carrier, or other means:	37	36
E.	Total Distribution:	2231	2211
F.	Office use, Left over, Unaccounted, Spoiled after printing:	269	289
G.	Total:	2500	2500

I certify that the statements made by me above are correct and complete.

/s/ Jack W. Deskin

Library Series Aired by KSYM

"The Library Hour," a unique broadcast series designed to acquaint students with facilities and services of the college library has been established by KSYM-FM, San Antonio College, Texas.

SAC Assistant Librarian Mrs. Wilson Everts, who directs the program, describes it as "the only one of it's kind in the nation."

The series, which broadcasts Monday-Friday, 5-6 p.m., features a versatile and varied format involving academic, informative, cultural and entertaining subjects. Programming techniques include talk shows, speeches, guest interviews, panel discussions, technical lectures, musical resumes, book reviews and a discussion of recent acquisitions of the library.

An important aspect of the series is to provide supplementary material for academic courses. To accomplish this goal KSYM-FM has aired special programs such as "The Contemporary Novel," "Preparing for Freshman English," "Communication and the Mass Media, "The Library as a Tool for Research," and other instructional material.

"The radio station is an excellent means of disseminating information about materials and services available through the library," said Mrs. Everts, "and 'The Library Hour' opens doors for creative endeavor giving new impact to old methods of presentation."

This radio series is also seen by San Antonio College officials as evidence of cooperation in the field of communication—something which they consider sadly lacking in many academic circles.

The program has been well-received by "outsiders,' and many noted authors, government officials, college faculty members and businessmen have offered their services as guest speakers.

The program schedule, prepared by Miss Jean M. Longwith, director of KSYM-FM, was approved by the Federal Communication Commission.

KSYM-FM, which began broadcasting from the Fine Arts Building on the San Antonio College Campus in 1966, was established to provide a facility for comprehensive and specialized training in the technical procedures related to the Broadcasting Technology program offered at the College. The program was designed to provide students with opportunities for experience in station management, programming, audio operation, microphone technique, logging and production. In addition, the station would provide for the storage and for the retrieval of information of lasting academic value.

Mike Goodwyn, Robert Richey, Nathan Belsher and John Cheney were the first students assigned to staff positions.

The radio station has a library of all taped programs. The San Antonio College Library maintains a card catalog of the more significant tapes. These duplicates are available for use in the classroom and in the listening booths of the Audio-Visual department of the library.

The Spotlight Is on

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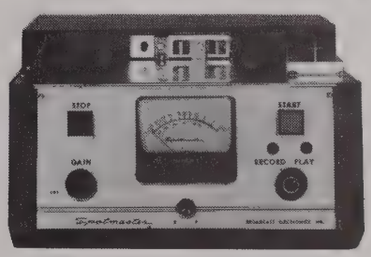
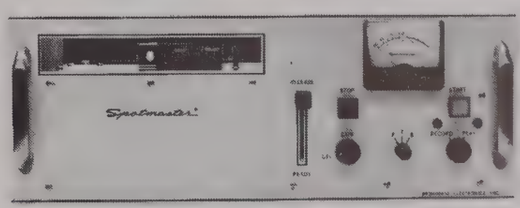


Model 500 C

Model 400 A



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KLOR *(Continued from Page 9)*

year are signed by the sales department, operating under the business manager. KLOR advertising now costs $.90 for a 30-second spot. The volume of advertising has risen to the point of competing with local commercial stations.

Week-end newscasts will be broadcast in addition to the daily major news-casts during the week. Expansion of the "News Headlines at 58" feature will include a possible sports program at 28 minutes past each hour. Sports department officials plan to meet the needs of the students through the broadcasting of the "away" games in basketball and baseball. This practice has met with good comment from the students in the past year.

Announcer training classes are planned early next year prior to each individual's first airtime. In the past, the first few weeks have been trial and error periods for the new DJ's.

We have only mentioned some of the things concerning KLOR'S past, present, and future . . . And think it all goes to show how student ownership and dedication have made this enterprise go far in just four years.

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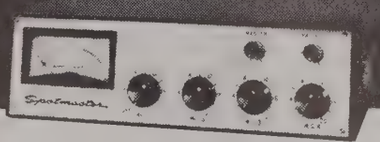

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FCC ACTIONS

NEW FM FINAL ACTIONS

WOUB (FM) Athens, Ohio—Granted Mod. of CP to add circular polarization, change type ant., remote control permitted. Action August 27.

WGES (FM) Trumbull, Conn.—Granted mod. of CP to extend completion date to Feb. 1, 1969. Action August 13.

KHRU (FM) Clayton, Mo.—Granted license to cover new station.

KOVF (FM) Kearney, Neb.—Granted license to cover new station.

WDYN (FM) Chattanooga, Tenn.—Granted license to cover new station.

KLCC (FM) Eugene, Ore.—Granted CP to change ant. and transmitter location. Also change studio location and install new type transmitter. Action June 21.

KUNF (FM) La Canada, Calif.—Granted license covering changes. Action Sept. 6.

KXLU (FM) Los Anglees—Granted license covering changes. Action Sept. 6.

WONC (FM) Naperville, Ill.—Granted license covering new FM noncommercial station. Action Sept. 5.

WBKE- (FM) North Manchester, Ind.—Granted license covering new FM noncommercial educational station. Action Sept. 5.

WKTL (FM) Struthers, Ohio—Granted CP to install new type ant. Action Sept. 4.

CALL LETTER ACTION

Indiana University of Pennsylvania, Indiana, Pa.—Granted WIUP (FM)

NEW FM STATION APPLICATIONS

Wallingford, Conn.—The Choate School Foundation Inc. Seeks 90.1 mc, ch. 211. 10 kw. P.O. address: Christian Street, Wallingford, Conn.

Harrisonburg, Va.—Madison College. Seeks 91.1 mc. ch. 216. 10 w. Ant. height above average terrain minus 44.93 ft. P.O. address: Madison College, Harrisonburg, Va. 22802. Announced August 15.

Lincoln, Ill.—Lincoln Christian College. Seeks 88.7 mc. ch 204. 10 w. Ant. height above average terrain 72 ft. P.O. address: Limit at Keokirk, Lincoln, Ill. 67656. Announced July 19.

Worchester, Mass.—Worchester Collegiate Radio Network Inc. Seeks 90.5 mc. ch 213. 2 kw. Ant. height above average terrain 16 feet. P.O. address: c/o Worchester Polytechnic Institute, 172 West Street, Worchester, Mass. 01609.

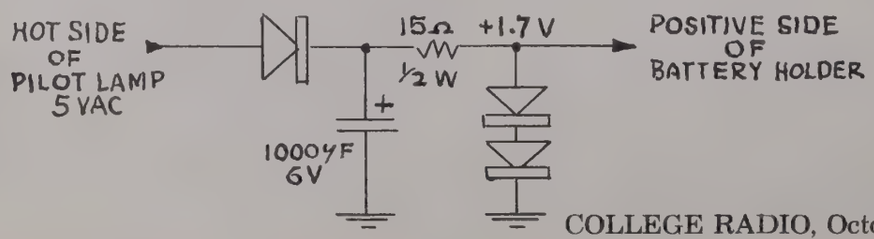
St. Helen Mich—Kirtland Community College. Seeks 105.5 mc. ch. 288. 3 kw. Ant. height above average terrain 300 ft. P.O. address: 814 Lake Street, Roscommon, Mich. 48653. Announced July 3.

TECH TIP

Quick Fix for Sick VTVM

Most kit-built vacuum-tube voltmeters use a flashlight cell to power the ohmmeter circuit. This cell-receives heat from the tubes and always seems to fail when the meter is needd. Here is an electronic replacement that fits the Heath V-7A and most others.

The exact output voltage is unimportant because the "ohms adjust" control compensates for any static variation. The supply must have low internal impedance, however, to prevent midscale errors on the "ohms X 1" scale. In this circuit the two series diodes provide regulation: their combined forward drop is 1.7 V. Zener diodes are unobtainable in this voltage range but any two silicon power diodes will do the job.



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SPECIFICATIONS – RC-5A

Power Output	4 watt RF carrier
Output impedance	5 ohms balanced
Audio input	600 ohm balanced audio line at -8 dbm
Audio distortion	less than 5 percent
Noise level	less than 50db below full modulation
Audio response	down 3db at 45 cps and 20 Kcs
Power input	approx. 60 watts at 117v AC, 50/60 cps

SPECIFICATIONS – RC-25B

Power output	20 watt RF carrier
Output impedance	50 ohm coaxial, SO-239 connector
Audio input	600 ohm balanced audio line at -15dbm
Audio distortion	less than 3 percent
Noise level	less than 50 db below full modulation
Audio response	down 3db at 35 cycles and 13 Kc
Power input	approx. 150 watts at 117v AC, 50/60 cps

LOW POWER BROADCAST CO.
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1968 Convo

Ken Draper, general manager and program director of WCFL, Chicago (now partner in db Programming) was one of the featured speakers in the Station Administration session.

Sol Handwerger exhibits MGM/Verve wares to a pretty (but unidentified) delegate.

It was Sunday, March 31, 1968 in the PM and the "Texan" was on the "Tube," and the smoke from Friday's fires had finally lifted from State Street. It was those Friday fires that caused the only hitch in the 29th Annual IBS Convention—the first to be truly national—by creating a traffic jam that made everyone wonder whether deligates would ever make it to the Palmer House Hotel. The Friday Blockade was to be nothing compared to the Monday melee when the "Man" came to town to address that "other convention" (NAB).

Five Hundred-Seventy-One collegiate broadcasters attended this IBS convo and they heard and met some rather prominent people, received many free promotions from the 30 exhibitors (the most in IBS history) and took advantage of Chicago's hospitality.

Where to start? Probably with names; but who? Space simply does not permit mention of all of them. Certainly mention must be made of Dr. Newton N. Minow, former FCC chairman who addressed the luncheon on "Educational Broadcasting—The Horizon" and the President, Editor and Publisher of *Broadcasting*, Sol Taishoff, who moderated the Saturday afternoon general caucus with Lee Loevinger, FCC commissioner; J. Leonard Reinsch, President of Cox Broadcasting Corp., and Clair R. McCollough, president of the Steinman Stations.

But that is just a start. Could someone have found a more professional radio news team outside of a network than the one led by John Webester of WCFL, Chicago? He managed to bring his two top people—Carole Simpson and Jeff Kamen. What about the Educational Broadcasting Session with Jerrold Sandler the executive director of the NAEB in attendance?

IBS Wrap-up

"Mister Radio," Dick Biondi was there along with two of his co-workers, Ron Britian and Jimmie P. Stagg.

What should you do when you graduate? That question was answered in an afternoon session by Roy Danish, director, Television Information Office; George H. Fuchs, vice president-personnel for NBC and Fredrick S. Gilbert, vice-president and general manager of Time-Life Broadcast.

An insight into creative public affairs programming was given by S. Dave Babbitt of WCFL.

The station administration session was presented by Joseph D. Coons, President and General Manager of WOHI AM-FM; Ken Draper, general manager and program director of WCFL, and Thomas C. Durfey, president and general manager of WHVW.

The well-received sales session included panelists Robert Vance of CRC, Frederick Smith of CRAM, Jon Clark of the IVY Network Corporation, and IBS Director Robert I. Freedman.

Two fine engineering sessions were conducted by IBS team members George E. Eustis, Jr. and Richard H. Crompton of Low Power Broadcast Co. and a Gates team of George Yazell and Loring Fisher.

Two additional sessions dealt with other areas of programming— a session in the morning on underground radio and one in the afternoon on classical music.

In keeping with Windy City tradition of hospitality, two stations opened their doors to the IBS Delegates. Tours were conducted on Friday and Saturday evenings through WMAQ (NBC) AM-FM and WCFL Radio.

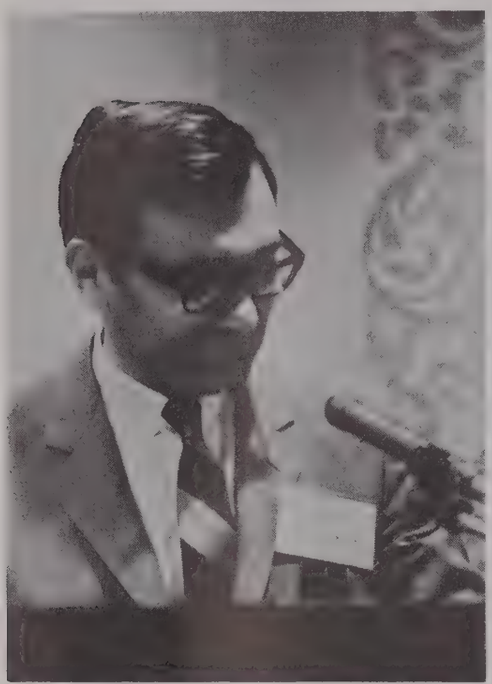
(Continued on Page 24)

Mel Bly (center) represented Viva Records at the 1968 IBS Convention.

A popular Underground Radio session brought together (left to right) Rod Collins, Ray Bottom Jr. and George Ponte.

IBS's Tom McCloud Jr. (right) introduces luncheon speaker Newton N. Minow (left) while George Abraham looks on.

Billboard Forum Panels Probe Programming



Rick Sklar, Program director for WABC, New York speaks to Billboard Forum delegates. Sklar addressed the IBS Convention three years ago.

The 500 delegates to the Billboard Radio Forum were challenged by a program as diverse and compact as the IBS Convention. The Forum, held June 7 and 8 in New York City, was modeled after the IBS "simultaneous session" structure, which encourages a station to send several staffers. Among the attendees were staff members of many college stations that took advantage of Billboard's 75% discount to College Stations.

From opening session Friday afternoon to the closing session and party on Saturday, the Forum offered a panaroma of examinations of programming. Despite the rescheduling of the program due to the RFK assasination, the Forum was such a success that plans for next year's program are already well underway.

Harvey Glascock, general manager of WNEW in New York chaired the Friday session which included addresses by WSB, Atlanta General Manager Elmo Ellis, Edmund Bunder of Interpublic, Inc., and Gordon B. McLendon of the McLendon Broadcasting Corporation, in Dallas. Presenting three viewpoints on new trends and influences in radio, the session provided an excellent sendoff for the meeting.

A second high point was Saturday afternoon's closing session hosted by Claude Hall of Billboard, entitled "The Playlist." Speakers were Ron Jacobs, program director of "Drake Format" station KHJ in Los Angeles, and Russ Barnet, program director of KMPC in Los Angeles.

Major portions of Jacob's address were oriented toward correcting what he believed to be misconceptions about Drake Format. A specific effort was made to answer the attacks of some vocal college broadcasters from Michigan.

Another feature of the Forum, per-

(Continued on Page 24)

Billboard Publisher Hal B. Cook opens the 1968 Billboard Forum.

Abe J. Voron, president of NAFMB and Walter Schwartz, president, ABC Radio Network were feature speakers for the "Trends in FM" session.

COLLEGE BROADCASTERS!

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4. 10 new Classical albums each month
5. 5 new Jazz albums each month
6. SELECT YOUR OWN Popular Albums — your personal choice of 10 new albums from a listing of 50 to 75 new releases sent your station the first of each month.

CATALOG ALBUM SERVICES:

7. Easy Listening
8. Singers—All Time Favorites
9. Golden Hits
10. Original Cast Broadway Show
11. Comedy
12. Folk (Pop and Authentic)
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14. Big Band Favorites
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Design Principles

Amplitude Modulation Techniques

By Ludwell Sibley

Obtaining clean amplitude modulation requires the same attention to detail that any other engineering project demands. Here are some principles of good design for carrier-current AM transmitters.

Modulators

The modulator is simply a high-power audio amplifier, different from home "hi-fi" amplifiers only in using balanced input and matching a high-impedence load. Its frequency response should be free of lumps and its distortion percentage low. Many stations have found that adapting a standard hi-fi amplifier such as the Dyna 40-watt model is easier than trying to build their own.

More usually a custom-built modulator to fit the rest of the transmitter design is called for. This is not hard to build if feedback and good transformers are used. The presence of an input transformer makes a phase inverter unnecessary since grounding the center tap on its secondary winding gives the necessary out-of-phase voltages. This allows building an all-push-pull circuit which cancels even-harmonic distortion. Transistor amplifiers are now easy to build and are recommended for new construction. The design in MH 52.70 is an example of a good tube modulator.

Negative feedback is obtainable in a number of ways. Taking it from the output tube plates is only partly effective because it leaves the output transformer out of the loop, free to add distortion and lumpy response. If the transformer has a special feedback winding, like the UTC LS-56, this is a better place.

Feedback from the secondary winding is better yet because it includes all the leakage inductances of the unit. These methods all leave the RF amplifier and its non-linearities out of the feedback path. A way to include these would be to pick up a small sample of the RF output, detect

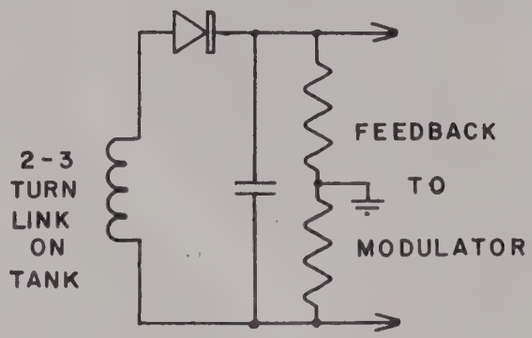

FIG. 1

it, and use the audio thus obtained for feedback to the modulator. Fig. 1 shows a detector circuit for push-pull use.

The proper frequency response for the modulator is debatable because highs above 5 kHz spill over into adjacent channels and cause very annoying interference that sounds like overmodulation spatter. Response to kHz uses up *three* channels instead of one.

The FCC allows AM broadcasters to modulate to these frequencies only in isolated cases where absence of interference can be proven. In terms of carrier-current operation: if the adjacent channels are nearly clear, fine, but if the second or first adjacent frequencies on either side have listenable signals on them it is wise to restrict the highs to 10 or 15 kHz respectively. Few radio receivers respond above 6 kHz anyway. The easiest way to limit the highs is to use an unequalized program line. Frequency-sensitive feedback is another good way to roll off the high end.

The choice of modulation transformers require consideration. The cheaper speechband units give large distortion and poor frequency response. The UTC CVM series transformers are popular and work well, especially if used well below their power ratings. The LS-56 is a fine transformer but is expensive. Depending on how the strapping of windings turns out, the primary may have unused taps. If these are at roughly 40 percent of the turns on each side the tube screens may be connected to them to give "ultra-linear" feedback popular in hi-fi systems.

Excessive audio voltages can appear across the modulation transformer if the load disappears, as when RF drive or supply voltage fails. Simple protection against this comes from connecting a string of neon lamps across the secondary winding or part of it, with the number chosen such that normal potentials will just fail to light them.

Coupling to the RF Amplifier

FIG. 2

The modulator works into a resistive load given by the RF supply voltage divided by the amplifier cathode current. The easiest way to couple to this load is to connect the secondary winding in series with the amplifier supply line (Fig. 2).

This has the disadvantage of putting a DC bias in the transformer core, causing it to operate closer to its nonlinear region and give more distortion. The solution to this difficulty is to use a separate inductor and coupling capacitor to keep unbalanced DC out of the transformer. If one end of the secondary winding is tied to the supply line (Fig. 3) the capacitor must withstand audio peaks as large as the supply voltage, and the transformer insulation must take twice this value. If the winding is returned to ground (Fig. 4) it receives only the audio peaks but the capacitor must hold off twice the voltage.

For low reactance at low frequencies the capacitor must be at least a microfarad, preferable oil-filled. The choke must provide a reactance large compared to the impedance of the RF stage at low frequencies, even with normal DC current flowing in it. The UTC CG-44 (30 H, 100 mA) works well. As a practical matter, it is usually easier to accept DC flowing in the transformer, use the next larger size to compensate, and omit the capacitor and inductor. This gets the same performance at less cost than buying the

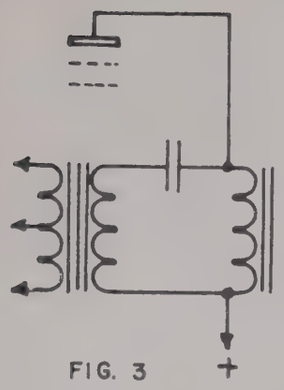

FIG. 3

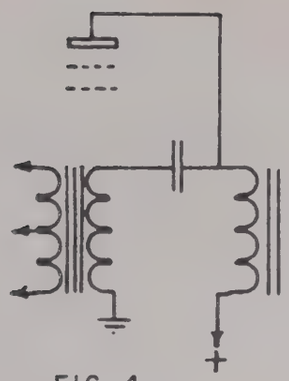

FIG. 4

three components and saves space and weight.

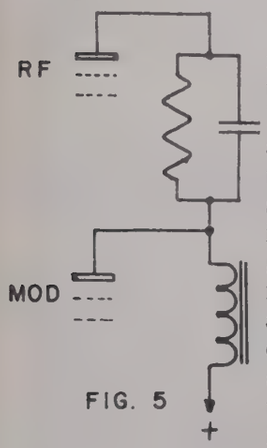

FIG. 5

One trap to avoid is an attempt to use a choke-modulator (Fig 5) in an attempt to save a transformer. This scheme is highly inefficient — it can give 100 percent modulation only if as much voltage is dropped across the series resistor as the RF amplifier itself receives. Practical designs (for example, MH 52.66 and 52.96) cannot attain anywhere near 100 percent in the upward direction, whereas carrier-current service requires full modulation so that a relatively weak signal can compete with noise and crossmodulation hum. Saving a transformer here is poor economy.

If the modulator is a converted hi-fi amplifier and if the RF amplifier load is roughly a quarter of the normal plate-to-plate load of the audio tubes it may be possible to avoid using an extra step-up transformer between the two by direct capacitor-choke coupling (Fig. 6). Autotransformer action in the output transformer will give the push-pull tubes the balanced load they require. The actual load is unlikely to be critical because of the reserve power and generous feed-back of typical amplifiers.

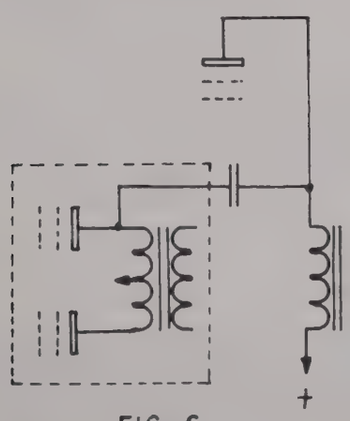

FIG. 6

The RF Amplifier

Proper plate modulation of a Class C amplifier requires setting the drive and bias for proper operation, getting the right tank circuit Q, and paying attention to reactances in the plate supply circuit.

The plate voltage ranges between zero and twice the DC supply voltage under 100 percent modulation. Low distortion requires operation in the saturated region of operation, with peak RF voltage delivered to the tank only slightly less than the modulated supply voltage coming in. Instantaneous peak power is then four times the average power. The RF driving power must be high enough to turn the tube fully on on peaks, but with enough internal impedance to limit grid dissipation when the plate voltage swings low. Easy adjustment of drive is obtainable by putting a potentiometer in the screen circuit of the driver tube.

FIG. 7

Bias voltage for the amplifier can come from combinations of cathode, fixed, and grid-leak bias. Grid-leak bias is most convenient but falls off if drive ceases. Cathode bias is insufficient by itself but limits the plate current in case the excitation fails. Fixed bias is stable despite variations in supply voltages and loading but requires a separate supply, preferably regulated.

A useful compromise is a combination of grid-leak and either fixed or cathode bias, each source contributing about half the total. The grid-leak resistor is chosen so that with normal grid current (2mA or so) the voltage drop across it is the required half, typically 40 to 45 volts. A convenient replacement for fixed bias supplies is a zener diode between the tube cathode and ground; it replaces a transformer, rectifier, filter, and regulator (see Fig. 7) It also provides a regulated positive voltage suitable for transistorized drivers.

The capacitor across a grid leak, or across a cathode resistor, should present a reactance of at least twice the resistance at the highest modulating frequency so that the bias voltage will be able to follow the modulation for best linearity. This is equivalent to requiring a time constant of less than 1/10 the period of the modulating frequency. For example, if the grid leak is 15 K, the capacitor should be about 500 pF, giving 32 K at 10 kHz. A coupling capacitor from the driver should similarly be limited in size.

The bandwidth of the tank circuit is inversely proportional to its Q. A tank with a Q of 20 will have a 3-dB bandwidth of 30 kHz at 600 kHz. A high Q gives good discrimination against harmonics but also involves large circulating currents. This forces a compromise value typically in the area of 10 to 15, with 12 a common value. With this moderate value there is no appreciable discrimination against high modulating frequencies. A Q of 12 implies a tank capacitor of the order of 1000 pF at carrier-current frequencies.

Reactances in the amplifier plate and screen circuits affect the high frequency response. The plate feed choke must be 5 or 10 mH to be effectively an open circuit at the carrier frequency. Since it and the tank coupling capacitor form a lowpass filter for audio, chokes larger than 10 mH and coupling capacitors larger than about 2000 pF are undesirable—these values give a filter cutoff frequency of 35 kHz. The bypass capacitor on the supply end of the choke should likewise be held to about 2000 pF. The tube screen voltage must vary with modulation for linear modulation so its bypass capacitor should be less than 2000 pF, with 1000 typical.

Figure 8 shows a typical final amplifier circuit using shunt B+ feed to keep lethal potentials off the tank circuit.

(Continued on Next Page)

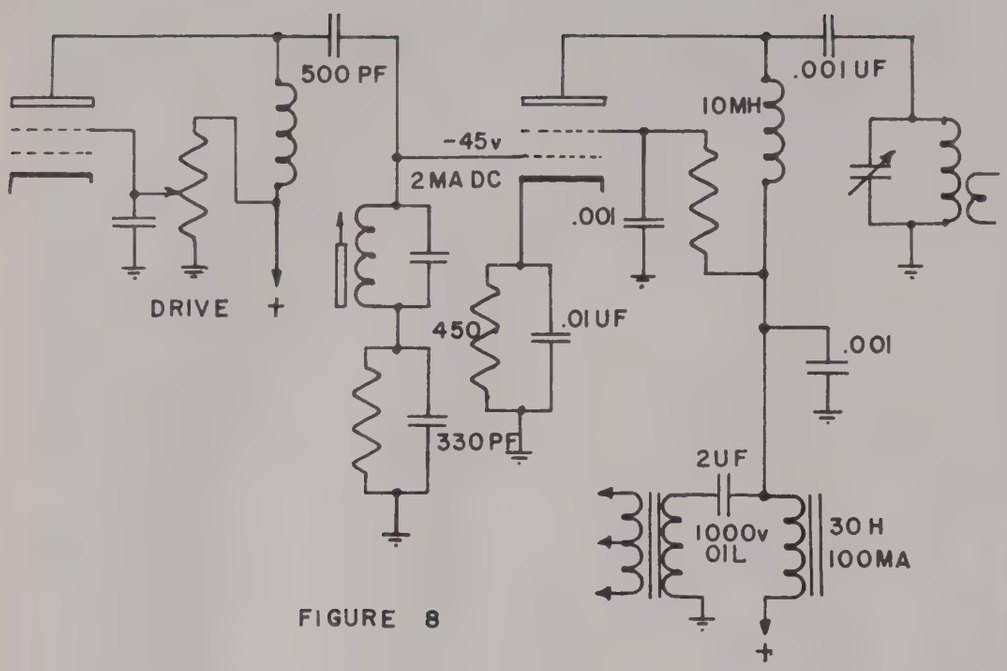

FIGURE 8

Tests

An oscilloscope on the RF output of the transmitter will show the quality of the modulation. Flattened positive peaks may be the result of improper bias or weak cathode emission. Quick-look frequency response tests can be made by measuring the audio voltage going into the final amplifier but really accurate tests must be made with a detector on the RF output so as to include the final stage.

IBS Convention

(Continued from Page 19)

Sleepless nights were in order for the delegates but one sweet gal did all she could to, in her words, make it a CFL-of-a-weekend for the delegates. The young lady, Mary Sweeney, is Public Relations Director of WCFL.

On Sunday the NAB cordially opened its Exhibit Hall to IBS delegates (well worth the trip in itself).

The 29th IBS Convention was the first three day convention in IBS history and the first to have the added incentive of an NAB floor pass.

Billboard Forum

(Continued from Page 20)

haps in itself well worth the trip to New York, was complementary admission to Carnegie Hall Friday evening for the performance of the Kasesetz-Katz Singing Orchestral Circus, courtesy of Buddah Records.

Of the 19 sessions offered during the four periods, the "number one rocker" was Dick Starr, director of programming for AVCO Broadcasting in California. His comments on audience shaping and answers (based on competition, station philosophy, and "second-order" effects) to questions set the pace for the day for many delegates.

Others participating in the Forum sessions, including many familiar to college station staffs due to recent appearances at IBS Conventions, read like a who's who in Broadcasting: Ken Gaines of WHK, Cleveland; Jon Holiday of KMBZ, Kansas City; William Meeks of PAMS, Inc; Walter Schwartz of ABC Radio; Gary Stevens of WMCA, New York; Ken Draper, William B. Williams, Rick Sklar of WABC, Lenny Salidor of Decca; Neil Bogart of Kama Sutra; Murray (The K) Kaufman, and many of the Billboard editors and staff.

Books For Broadcasters

(Continued from Page 14)

helping broadcast stations reap benefits of bigger and better promotional campaigns. There are hundreds of new ideas in the book which spark hot, new ways of promoting a station. Both on-air and off-air campaigns are discussed. The finale chapter includes many sales promotion ideas; sales presentation material, trade-oriented advertising, direct mail use, using your own station, "Personal" promotion, entertaining, station parties, internal promotion and many other useful and helpful ideas that can be put to practical use at your station.

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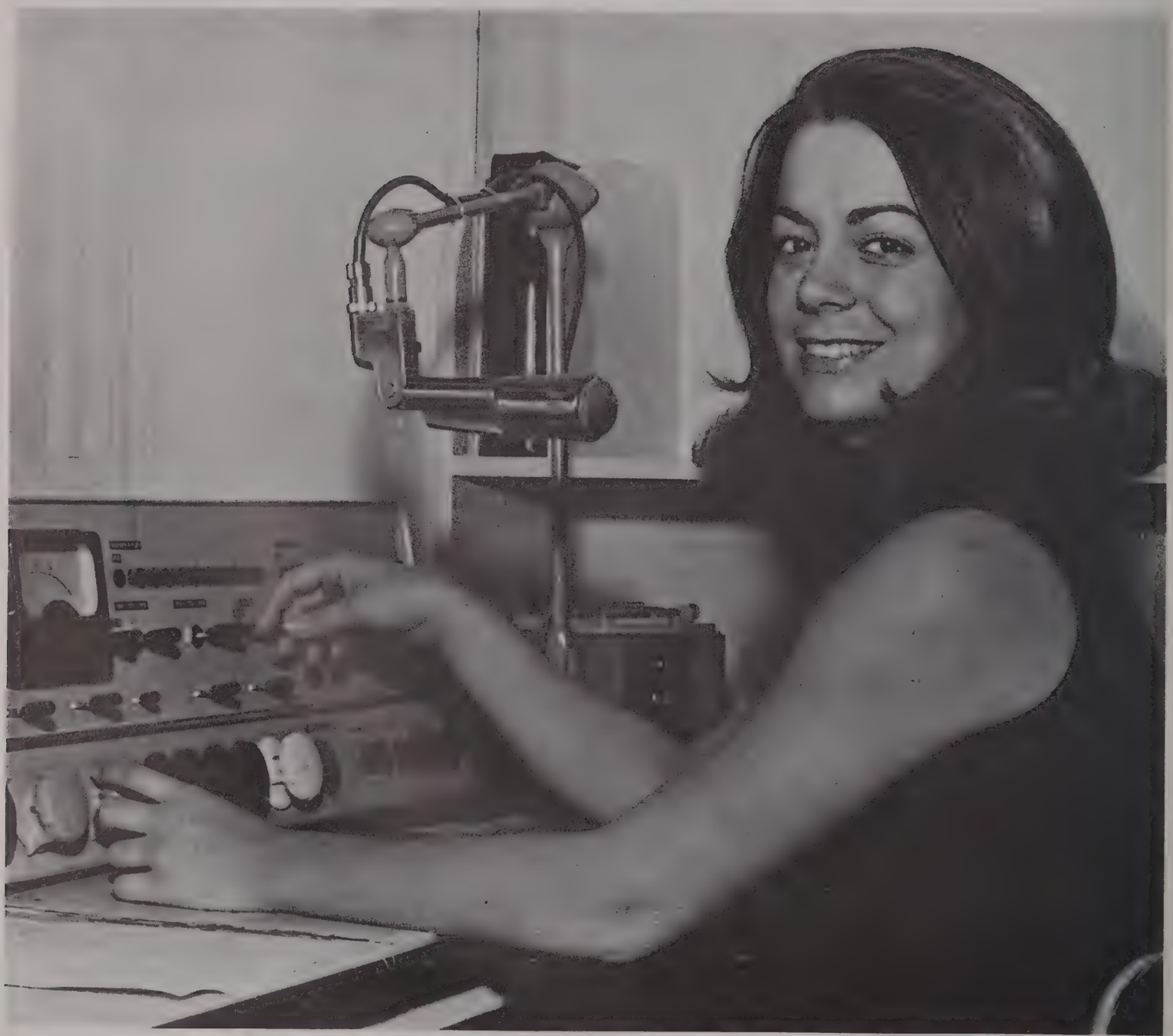
Studiomate



Studiomate honors for October go to pert Linda "Brat" Bratcher—a freshman announcer at WAUR, Andrews University, Berrien Springs, Michigan.

Publisher's Podium

The FCC has given collegiate broadcasters and early Christmas present, at least for AM and FM operators. It is the new Provisional Radio Operator Certificate with broadcast endorsement which enables holders to operate a station for one year before actually taking the Third Class Operators test.

Applicants must submit FCC Form 756 by mail to the nearest FCC office with the $3.00 fee in the form of a check or money order. The application must be signed by a first class operator who certifies that he has personally instructed the applicant in the operation of a broadcast station, and believes he is capable of performing the duties of a person holding a Radiotelephone Third Class Operator Permit with Broadcast Endorsement.

Before signing the application, Chief Engineers at several stations are giving the applicant a test similar to that given by the Commission.

This assures the station of having competent operators running the station at all times. We feel that this is a practice that all stations should follow. Sometimes we devote more time to promotion and programming and forget about the general sound of the station. This is not to say that promotion or programming should be deemphasized, but we should keep in mind the technical aspects that add so much to the programming.

The provisional certificate will prove beneficial to collegiate broadcasters, but it should not be abused. The Chief is doing the station a great injustice by signing blank checks for applicants.

The December issue of *COLLEGE RADIO* will be the 1968 CR Annual. In the past, the October issue has served as the annual which includes many features that station reps and advertising agencies use all year long.

The IBS Vice President for Publications, Tom McCloud and CR's publisher and editor felt that the annual would be more beneficial if the station directory listed present station executives and current station services instead of last year's. Since many stations do not appoint their 1968-69 staff members until the school year begins, CR delayed the station questionnaire until the latter part of September. This should make the station directory the most up-to-date of any previous annual. Also, CR is adding some new features to the annual which necessitate the delay.

If your staff desires extra copies of the annual, now is a good time to send in your request. The cost is only $1.00 for extra copies and they should be ordered now.

Jack Deskin

Sales Column

Reps Need Your Help To Understand Market

This column devoted several articles last year to national advertising for the college radio station. *COLLEGE RADIO* predicted that the national advertising income would rise during 1967-1968—and we can proudly say—that it did.

Many stations found themselves with a good station representative who was working hard to tell national advertisers the college radio story. These reps are people that not only know broadcast sales, but also understand the college radio market. But, they need your help in understanding your particular market. Even though the college market is unique with characteristics unknown to other markets, each college market has its own particular characteristics which vary with the size of the school, its locale, its curriculm, and its co-educational environment. The rep cannot go to a women's cosmetic manufacturer and make a presentation for your station without knowing first if the station is located at an all men's school or a church affiliated school whose doctrine does not believe in cosmetics.

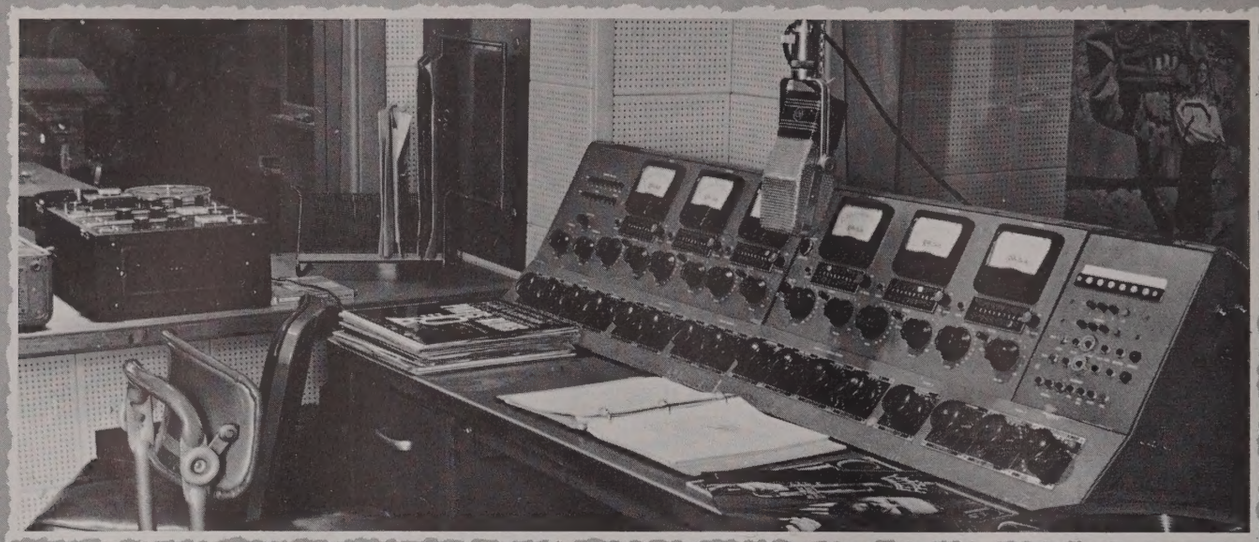
The rep also needs to know the buying power of the student body and the selling power of your station. Can you tell your rep how many students live off campus and how many of them you can reach? How many can you reach on campus?

Does your rep know your school holidays and semester breaks? Each time you run a promotion, do you tell your rep the results and number of entries? Does he know the average number of requests your disc jockies receive an hour? Have you sent your rep a copy of a letter from a satisfied client telling of the results of his advertising?

Does the rep understand your rate card? Can he tell an advertiser your cost per thousand per commercial minute? Have you re-evaluated your rate card lately? Is it the same as it was five years ago? If you have raised your rates, can they be justified, and does the rep know the justification? And finally, do you send your rep the affidavits on time? He cannot collect from the advertiser until you send him the proof-of-performance.

These are small things that do not require much expense and really not much effort. But they are things that can help your rep tell your story to the advertiser. With the swing to college radio advertising and the new college radio oriented station representatives soliciting business for stations, this could be an even bigger year . . . as big as you want to make it.

Sign Off!



Enhancing Station Horizons

There have been many comments pro and con about the IBS regions. This is no doubt due to the make-up of the regions themselves. Some have a very enthusiastic constituency and are very active, others have a gung-ho regional director with apathetic stations, and others just aren't.

There are many rewards to a station in an active region. These accrue from projects based on a regional level; but these projects do not have to be run out of the regional directors office. A station that has a good idea can get approval and some funding from its regional director to undertake a project that would be beneficial to the region.

Regional Rundown

Regional activities that can be beneficial to some or all members of a region are:

1. Surveys—all kinds—eg. station needs, programming formats, etc.
2. Program exchange, local interest programs or sports short of highlights of athletic events between stations in the same athletic conference.
3. Regional news network—this has a potential advertising market.
4. Regional meetings for both organizational and informational purposes.
5. Regional sales programs for the advertiser too small to be national that wants to cover the college market.
6. Liaison with regional and statewide broadcast associations. These professional groups are willing to give aid and support to college stations.
7. Local election coverage—telephone reports from major election headquarters.
8. Professional aid from stations with all that talent to those who have not.
9. Training workshops—announcers, DJ's, sportscasters.
10. Loan of broadcast facilities to visiting stations. The local station is not using its loop to the AT & T longlines board during home athletic events, why not loan it to the visiting station to eliminate local line charges.
11. Periodic publication of a list of special events by regional stations. Excellent color for a show is a phone interview with the DJ at Podunk U doing a three-day marathon.
12. Regional newsletter—several pages of news, tips, etc.

There are many other projects that are regionally oriented. If you have a good idea contact your regional director or the regional coordinator in Middletown. Regional information can be found starting on page 06.00 in the IBS Master Handbook. It includes a list of stations by region, regional directors and a map showing the breakdown of the IBS Regions.

Apathy Kills

If you are dissatisfied with your region, get together with other stations and do something about it. If you are satisfied, don't be apathetic. The quickest way to kill the enthusiasm of others is to "file" their inquiries, or be all criticism and no action.

George F. Eustis Jr.

George F. Eustis
President

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8:30-10:30 Tours
10:00-12:00 Reception

Saturday, March 22

8:00- 9:30 Registration
8:15- 9:30 Coffee and Donuts
8:30-10:15 Exhibits
10:30-11:45 Sessions
10:30-11:45 Workshops
10:30- 2:00 Tours
12:00- 2:15 Lunch
12:00- 2:15 Exhibits
2:30- 3:30 General Caucus
3:45- 5:00 Sessions
3:45- 5:00 Workshops
4:00- 6:00 Exhibits
4:30- 6:00 Tours
7:00- 9:00 Dinner
9:00-10:00 Regions
10:00- Film or Show

Sunday, March 23

10:30-11:45 Sessions
10:30-11:45 Workshops
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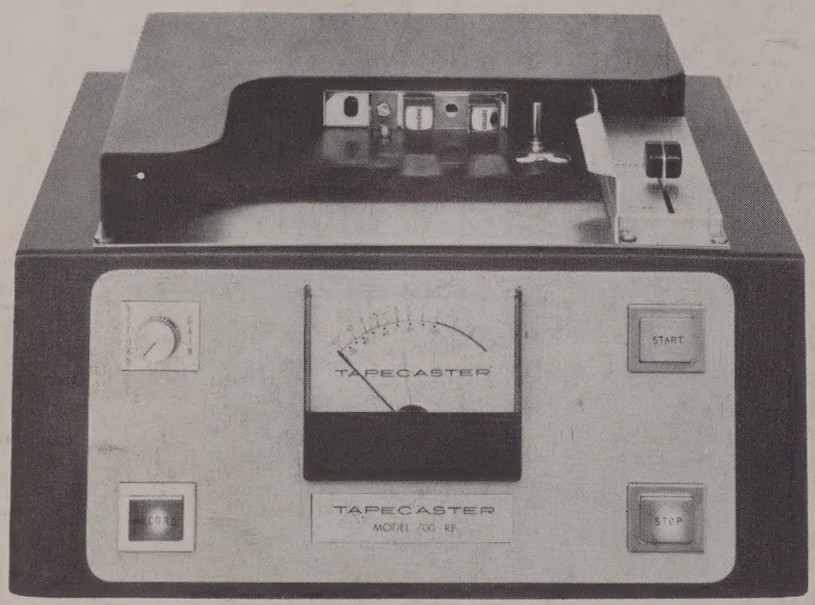

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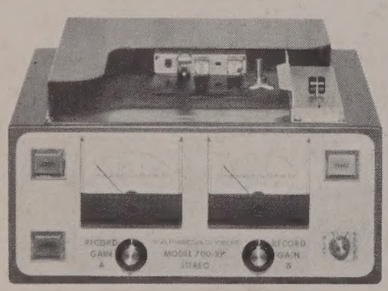

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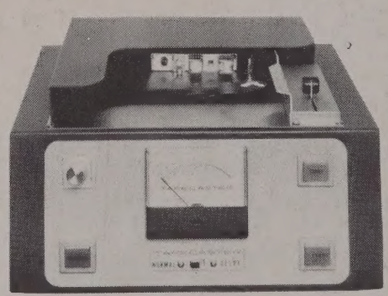

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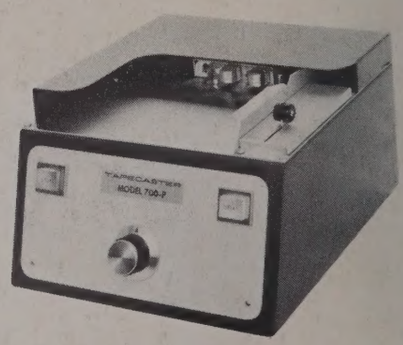

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